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GRANULAR CELL AMELOBLASTOMA

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ABSTRACT

Granular cell ameloblastoma is an uncommon variant of ameloblastoma, which is clinically aggressive and histopathologically has numerous large eosinophilic granular cells. These cells usually form the central mass of the epithelial tumor islands and cords. The clinical, radiographical and histopathological features of this tumor with its biological behavior are discussed.

KEYWORDS: Granular cell ameloblastoma (GCA); tumor islands; body of mandible; ameloblastoma variant.

INTRODUCTION:

Odontogenic tumors are lesions originating from epithelial and/or mesenchymal components of the tooth-forming apparatus. They are unique to the jaws and if left untreated, often lead to extensive tissue destruction and deformity. They comprise a complex group of lesions that exhibit diverse histological patterns and various clinical behaviors. These developmental associated tumors are generally benign, although several reveal a neoplastic nature and show locally invasive behavior with a high risk of recurrence. Due to their histological similarities to the developing tooth tissues in normal odontogenesis, the correlation among them is the basis for their classification[1].

The granular cell ameloblastoma is an uncommon variant of ameloblastoma which has been reported to be clinically aggressive[2]. Usually it resembles follicular type but epithelium in the centers of the tumor islands, forms sheets of large eosinophilic granular cells resembling those of granular cell tumors .
This change may be so extensive that peripheral columnar cells are replaced and the tumor is difficult to recognize from a small biopsy specimen.

DISCUSSION:

It is well known that ameloblastoma is locally invasive and has marked tendency to local recurrence[4]. GCA represents a rare variant of ameloblastoma. Moreover, cases of classical ameloblastoma with only focal presence of granular cells have to be differentiated from the pure variant of GCA, in which the neoplastic granular cells are diffusely present and predominate[5].

Concerning histogenesis, the granular cells of ameloblastomas are of epithelial nature, and arise from ameloblasts. Conversely, the granular cells found in other lesions of the oral cavity are of mesenchymal derivation[5]. During normal amelogenesis, ameloblasts show an increase in autophagic lysosomes between the secretary and absorptive stages and from reduced ameloblasts to squamous epithelium. Thus, the odontogenic epithelium seems to undergo granular changes under certain conditions. The high activity of acid phosphatase could confirm that the cytoplasmic granularity is due to high lysosome content, as shown in the histochemical studies[5].

It is currently thought that the granular change probably occurs as a consequence of an altered function of tumor cells, a hypothesis supported further by the finding that this tumor is age-related. In some cases granular cells show intracytoplasmic crystalloids, which probably constitute variant types of lysosomes, possible due to cellular deganaration[5].

Hartman has reported a series of 20 cases of GCA and emphasized that this granular cell type appears to be an aggressive lesion with marked proclivity for recurrences unless appropriate surgical measures are instituted at the first operation[6].

The prognosis of granular cell ameloblastoma is similar to that of the classical ameloblastomas. Few cases have been described with an aggressive biological behaviour, with high recurrence rate.

As previously mentioned this is the of the case of recurrence which is showing metastasis to the submandibular lymphnodes and only few cases are reported in literature with metastasis to cervical lymphnodes and metastasis to lungs [4], so to conclude thorough examination of whole body is necessary in GCA cases.

REFERENCES:

1. Stolf P D etal: Genetic aspects of ameloblastoma: a brief review; Biotechnology and Molecular Biology Review Vol. 2 (5), pp. 116-122, December 2007.
2. Klieb etal: granular cell ameloblastoma: report of a case and review of the literature; *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2008; 105 (4); e48-49.
3. Yamamoto G: Granular cell ameloblastoma-A rare variant; *Int. J. Oral Maxillofac. Surg*. 1989; 18:140-141.
4. Tsukada Y etal: Granular cell ameloblastoma with metastasis to the lungs- Report of a case and review of literature: *Cancer* 1965; 18; 916-925.
5. Muzio L L etal: *Oral Oncol, Eur J Cancer,* 1996; Vol. 32B, No. 3, pp. 210-212.
6. Text book of Oral pathology, 5th edn, India, Elsevier, 388-389.
7. Regezi J A, Sciubba JJ. Oral pathology, 5th edn. Philadelphia, PA, W.B. Saunders, 272-273.